



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,533	08/22/2003	Hironobu Shinohara	241912US0X	8113
22850	7590	01/04/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				ZACHARIA, RAMSEY E
ART UNIT		PAPER NUMBER		
				1773

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/645,533	SHINOHARA, HIRONOBU	
	Examiner	Art Unit	
	Ramsey Zacharia	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 October 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

2. Claims 1-9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimaki et al. (U.S. Patent 6,191,837) in view of Bennett (U.S. Patent 4,674,840).

Fujimaki et al. teach a liquid crystal display comprising first and second substrates with electroconductive films provided on one or both of the substrates (column 5, line 66-column 6, line 13). The electroconductive film may comprise a polythiophene (column 6, lines 40-55). A polarizing plate may be disposed on one side of the electroconductive film (column 6, lines 28-30). The electroconductive film has a surface resistivity of 100 kΩ/square, i.e. $10^5 \Omega/\text{square}$ (column 10, lines 8-11). The material of the electroconductive film further comprises an oxidant, which reads on the dopant of instant claim 3 (column 11, lines 4-11). The thickness of the electroconductive film is from 100 Å to 1 μm, i.e. less than 3 μm (column 11, lines 23-27). The material of the electroconductive film may comprise an organic binder (column 11, lines 28-35). A hard coat may be applied to improve mechanical strength and durability (column 13, lines 23-30).

Fujimaki et al. are silent as to the visible light transmission of the electroconductive film. However, the film of Fujimaki et al. should intrinsically possess a visible light transmission of 78% or more since it is composed of the same material as the instant conductive polymer, is

Art Unit: 1773

formed to the same thickness, and is designed to be optically transparent since it is used as in a liquid crystal display.

Fujimaki et al. are silent as to the material of the substrates.

Bennett teaches the use of a polymer such as cellulose acetate or cellulose acetate butyrate (i.e. acetyl cellulose materials) as a substrate for liquid crystal displays (column 3, lines 3-17). Substrates formed from such polymers facilitate handling and manufacture of the display device (column 3, lines 8-12).

One of ordinary skill in the art would be motivated to use the cellulose acetate or cellulose acetate butyrate polymer of Bennett as the substrate of Fujimaki et al. to facilitate handling and manufacture of the resulting display device.

3. Claims 10-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimaki et al. (U.S. Patent 6,191,837) in view of Hani et al. (U.S. Patent 5,334,424).

Fujimaki et al. teach a liquid crystal display comprising first and second substrates with electroconductive films provided on one or both of the substrates (column 5, line 66-column 6, line 13). The electroconductive film may comprise a polythiophene (column 6, lines 40-55). A polarizing plate may be disposed on one side of the electroconductive film (column 6, lines 28-30). The electroconductive film has a surface resistivity of 100 k Ω /square, i.e. 10⁵ Ω /square (column 10, lines 8-11). The material of the electroconductive film further comprises an oxidant, which reads on the dopant of instant claim 13 (column 11, lines 4-11). The thickness of the electroconductive film is from 100 Å to 1 μ m, i.e. less than 3 μ m (column 11, lines 23-27). The material of the electroconductive film may comprise an organic binder (column 11, lines 28-

35). A hard coat may be applied to improve mechanical strength and durability (column 13, lines 23-30).

Fujimaki et al. are silent as to the visible light transmission of the electroconductive film. However, the film of Fujimaki et al. should intrinsically possess a visible light transmission of 78% or more since it is composed of the same material as the instant conductive polymer, is formed to the same thickness, and is designed to be optically transparent since it is used as in a liquid crystal display.

Fujimaki et al. are silent as to the material of the substrates.

Hani et al. teach a norbornene resin for use as a substrate in liquid crystal displays which is excellent in many areas including transparency, processability, strength, flexibility, and resistance to heat, moisture, water, and chemicals.

One of ordinary skill in the art would be motivated to use the norbornene resin of Hani et al. for the substrate of Fujimaki et al. to yield a product with improved transparency, strength, flexibility, and resistance to heat, moisture, water, and chemicals.

Regarding claim 11, the limitations of this claim do not require the conductive polymer film to be the outermost layer. Rather, this claim requires the conductive polymer film to be on the outermost layer. Therefore, Fujimaki et al. meet this limitation since their electroconductive film is in contact with the outermost layer.

Response to Arguments

4. Applicant's arguments filed 21 October 2004 have been fully considered but they are not persuasive.

The applicant argues that Fujimaki et al. teach neither the use of a norbornene or acetyl cellulose material nor a conductive polymer film with a visible light transmission of 78% or more. The applicant further argues that Hani et al. do not teach an acetyl cellulose film, a conductive film having a thickness of 3 μm or less, or a polarizer plate.

This is not persuasive because claims 10-18 and 20 are rejected over Fujimaki et al. in view of Hani et al. and not over either of the references individually. Where a rejection is based on combinations of references, one cannot show nonobviousness by attacking references individually. Furthermore, while Fujimaki et al. are silent regarding the light transmission of their electroconductive film, the film of Fujimaki et al. should intrinsically possess a visible light transmission of 78% or more since it is composed of the same material as the instant conductive polymer, is formed to the same thickness, and is designed to be optically transparent because it is used as in a liquid crystal display.

The applicant argues that Fujimaki et al. states that it is undesirable to deposit material made of triacetylcellulose.

This is not persuasive because the passage cited by the applicant of Fujimaki et al. refers to difficulties that arise from the use of substrates formed from triacetylcellulose fibers which are glued together and the leakage of agents therefrom. However, one skilled in the art would not expect a film of an acetyl cellulose material to exhibit such problems because the film would not use the same agents as would be required for a layer formed from fibers glued together.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones, can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 1773

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Ramsey Zacharia
Primary Examiner
Tech Center 1700**